

SH-PTP2 (D-1): sc-271106

BACKGROUND

The steady state of protein tyrosyl phosphorylation in cells is regulated by the opposing action of tyrosine kinases and protein tyrosine phosphatases (PTPs). Several groups have independently identified a non-transmembrane PTP, designated SH-PTP1 (also known as PTP1C, HCP and SHP), which is primarily expressed in hematopoietic cells and characterized by the presence of two SH2 domains N-terminal to the PTP domain. SH2 domains generally mediate the association of regulatory molecules with specific phosphotyrosine-containing sites on autophosphorylated receptors, thereby controlling the initial interaction of receptors with these substrates. A second and much more widely expressed PTP with SH2 domains, SH-PTP2 (also designated PTP1D and Syp), has been identified. Strong sequence similarity between SH-PTP2 and the *Drosophila* gene corkscrew (CSW) and their similar patterns of expression suggest that SH-PTP2 is the human corkscrew homolog.

CHROMOSOMAL LOCATION

Genetic locus: PTPN11 (human) mapping to 12q24.13; Ptpn11 (mouse) mapping to 5 F.

SOURCE

SH-PTP2 (D-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 373-404 within an internal region of SH-PTP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271106 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

SH-PTP2 (D-1) is recommended for detection of SH-PTP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SH-PTP2 (D-1) is also recommended for detection of SH-PTP2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SH-PTP2 siRNA (h): sc-36488, SH-PTP2 siRNA (m): sc-36489, SH-PTP2 siRNA (r): sc-270045, SH-PTP2 shRNA Plasmid (h): sc-36488-SH, SH-PTP2 shRNA Plasmid (m): sc-36489-SH, SH-PTP2 shRNA Plasmid (r): sc-270045-SH, SH-PTP2 shRNA (h) Lentiviral Particles: sc-36488-V, SH-PTP2 shRNA (m) Lentiviral Particles: sc-36489-V and SH-PTP2 shRNA (r) Lentiviral Particles: sc-270045-V.

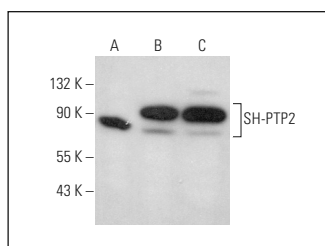
Molecular Weight of SH-PTP2: 70 kDa.

Positive Controls: SH-PTP2 (m2): 293T Lysate: sc-123530, HL-60 whole cell lysate: sc-2209 or HEL 92.1.7 cell lysate: sc-2270.

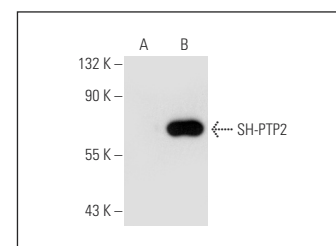
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SH-PTP2 (D-1): sc-271106. Western blot analysis of SH-PTP2 expression in NIH/3T3 (A), HEL 92.1.7 (B) and HL-60 (C) whole cell lysates.



SH-PTP2 (D-1): sc-271106. Western blot analysis of SH-PTP2 expression in non-transfected: sc-117752 (A) and mouse SH-PTP2 transfected: sc-123530 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Idrees, M., et al. 2019. PTPN11 (SHP2) is indispensable for growth factors and cytokine signal transduction during bovine oocyte maturation and blastocyst development. *Cells* 8: 1272.
- Idrees, M., et al. 2021. SHP2 nuclear/cytoplasmic trafficking in granulosa cells is essential for oocyte meiotic resumption and maturation. *Front. Cell Dev. Biol.* 8: 611503.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **SH-PTP2 (B-1): sc-7384** for SH-PTP2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.